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Material suggested for use in developing discussion
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WORKING TOWARD STABILITY FOR THE DAIRY INDUSTRY

Adapted from address of A. H. Lauterbach, Chief of the
Dairy Section, Agricultural Adjustment Administration, before
National Cooperative Milk Producers' Federation, Syracuse,
N.Y., November 13, 1934.

Production control is only one of the means by which the Adjustment
Administration may move to aid the dairy industry. To date it has been inad-
visable to institute such an adjustment program for milk and dairy products.
The results of the discussions last April, and the severe drought accompanied
by rapid and widespread liquidation of cattle and calves, have put the pro-
duction control feature temporarily in the background.

However, I believe we need to take a broad view of the subject and
be watchful and ready to balance our production with domestic demand so as
not to destroy the present rather favorable situation. It is likely that
feed and forage will be relatively scarce and high priced during the winter
feeding season, and that trade output for manufactured dairy products will
improve somewhat. This indicates a firm butterfat price for the season ahead.

While the dairymen have not received direct benefit payments for milk
reduction as such, farmers living in 10 dairy States have received 22 percent
of all benefit payments up to October 1. In these 10 dairy States farmers
have received 65 percent of all the corn-hog benefit payments to date, and
farmers in 8 dairy States have received 12 percent of all the tobacco benefit
payments to date. Dairymen are farmers first of all, and their work is diversi-
fied, so that in reality you cannot separate benefit payment entirely along
commodity lines. Dairymen are sharing somewhat in benefit payments for lines
of farming in which they are engaged besides milking cows.

Butter and Cheese Purchases For Relief

Since the funds were first provided under the Agricultural Adjustment
Act for removal of surplus dairy products and for the distribution of these
products to the unemployed, constructive services have been rendered to the
dairy industry as well as to those without jobs. There has been no destruc-
tion of the dairy surplus.

During the fall and winter of 1933 storage stocks of dairy products
accumulated to high levels, and production in the early fall was being in-
creased at a rapid rate. In view of the serious situation it appeared desirable



that surplus butter and cheese be diverted from regular trade channels to relief uses. Accordingly, the Land O'Lakes Creameries Inc., the Dairy Marketing Corporation, and the Federal Emergency Relief Administration joined in the work of buying 51,572,000 pounds of butter from August 1933 to April 1934. Most of these purchases were made in November and December, and all was distributed for relief purposes.

Since June 1934, contracts for 16,160,000 pounds of butter have been awarded and 4,948,000 pounds have been delivered. Since January 1934 bids have been awarded on 13,932,000 pounds of cheese, of which 6,401,000 pounds has been delivered.

It must be recognized that surplus removal alone cannot be expected to improve permanently the situation of dairy farmers, but it does eliminate abnormal surplus from regular trade channels. Without control over production, such artificial stimulation of dairy prices in relation to the prices of other farm products would eventually result in the increase of supplies and tend to offset gains made through removal of surplus.

However, it is planned to purchase from time to time such additional quantities of dairy products as are required for direct relief distribution.

Diseased Cattle Removal and Indemnity

One of the alternative proposals advanced during the meetings to consider production control was the testing of herds to speed up eradication of tuberculosis and Bang's disease. Already several months' work on tuberculosis control and about 2 months' testing for Bang's disease has been carried on by the Bureau of Animal Industry with funds provided through the Jones-Connally amendment to the Agricultural Adjustment Act. These funds have been allocated after conferences with breeders, cooperative organizations, and farm leaders.

Indemnities paid for cattle slaughtered on account of bovine tuberculosis, in cooperation with State sanitary officials, amounted to \$558,362 up to October 1, 1934. To October 1 indemnities amounting to \$51,737 had been paid to owners of cattle infected with Bang's disease.

Regulations are being drawn up for the first experimental work with mastitis, which is especially harmful in some fluid milk areas, and for this work a maximum allocation of one million dollars has been tentatively set aside.

From July 1 to September 30, herds tested for tuberculosis numbered 167,284 comprising 1,828,781 cattle, of which 83,402 reacted positively. The Bang's disease program has not been in effect very long because the first need was to concentrate effort on the drought-cattle problem. Now that the drought-cattle problem is less pressing, the Bang's disease program will be emphasized.

In 29 States from August 1 to September 30, Bang's disease tests were made on 4,356 herds comprising 32,627 cattle, of which 12,344 were removed. There are now on the waiting list for testing under the Bang's disease program 15,031 herds comprising about 284,000 cattle.

Drought-Cattle Purchases

Huge losses to cattle producers and to the Nation's food supply were averted through the prompt action of the Adjustment Administration in buying drought cattle, condemning those unfit for food, processing the better ones, and shipping others to pasture for further fitting. The beef obtained is utilized entirely in relief work. Up to November 1, a total of \$91,055,549 was paid for slightly over 7,000,000 head of cattle and calves bought on 578,000 farms in 24 States. The average price per animal was about \$13.50, and the total payment per farm averaged close to \$155. Part of the money was a purchase payment and part was a benefit payment under the Adjustment Act Amendment. The use of a benefit payment was a technical measure to conform to the act, so that drought purchases could start at once without waiting for special appropriations or loss of precious time, and also in order to enable the Government to pay individuals part of the money as benefit payments, free of lien or other debt encumbrance.

Nearly 16 percent of the cattle purchased from June to October were unfit for food and were disposed of at once. At the average price paid per head for all cattle, this means that nearly \$15,000,000 was paid to farmers on stock that would otherwise have been total losses except for their hides.

It is not anticipated that the reduction in cattle by these drought purchases will greatly reduce the general production of milk, except in extreme cases. Although it has been tentatively estimated that 20 percent of the cattle purchased were dairy stock, it is also known that for the most part dairymen sold cull cattle and saved what feed they had for their better ones. The saving of feed alone through this program was of great importance to cattle owners.

The administration has also set up a special information service for stockmen to assist them to locate and purchase feed and forage this winter, but Government agencies will handle no money and sell no feed.

Through the efforts of the administration there has been secured, with the cooperation of the railroads, reduction in freight rates on feed and hay and on livestock shipped in and out of grazing areas.

Evaporated Milk and Dry Skim Milk Agreements

Thus far the only marketing agreements on manufactured dairy products have been those undertaken in the fall of 1933 for evaporated milk and dry skim milk. Manufacturers assert that during the 12 months in which the evaporated milk agreement was in effect producers received an average of 21 cents per 100 pounds more than before the agreement was established. They state that on the volume covered by the agreement, this means \$8,600,000 more to producers in a year than they would have received at prices prevailing before the agreement was established. The evaporated milk agreement has stabilized prices and protected a majority of the farmers from such erratic price fluctuations as occurred in 1932 and early in 1933.

Fluid Milk Licenses

Up to November 1, 47 fluid milk licenses were put into effect by the Agricultural Adjustment Administration. The 50 or more cities where these licenses are effective are located in 18 States. More than 20 percent of the total volume of fluid milk consumed by the nonfarm population of the country is handled in these licensed areas.

State and Federal Government Relationships

We who have been concerned with dairy adjustment work under the Agricultural Adjustment Act have had a little more than a year's experience in drafting and operating fluid milk agreements and licenses. It has been an experiment, involving many changes.

As we look back, it is clearly apparent that one of the reasons for conflicts in ideas was a tendency in some parts of the industry to believe, or at least to hope, that marketing agreements would settle all problems as soon as a Federal license was issued to accompany an agreement, and that there was nothing further for the dairy industry to do in such cases but to sit by and watch the Federal regulation work.

As soon as some agreements and licenses became effective and numerous violations occurred on the markets, the industry expected that the Federal Government would immediately step in and force the violators to comply or face the penalty. It was forgotten that marketing agreement work was new, and that farmers and members of the industry needed time for education on how the agreements operate. Legal procedure in this country is designed to protect human rights, and the Federal Government cannot and should not proceed in any but a lawful manner even if that manner does take time.

There will be some delay before the Supreme Court decides how far the Federal Government can go in regulating the milk industry. We of the Agricultural Adjustment Administration have come to the conclusion that neither the Federal Government nor the State governments alone can do this job successfully, and that a cooperative program must be worked out.

We have had some demonstration of what can be accomplished through a Federal and State cooperative working arrangement, particularly in Rhode Island. The Rhode Island State Milk Control Board and the Federal authorities have experienced splendid working relations. We hope that in States having or contemplating milk control laws, the laws will permit practical working relations between the Federal Government and the State, whereby on request of a State the Federal Government may assist in stabilizing market conditions, confining itself largely to interstate problems within fields where the State's jurisdiction is not clear.

It may be necessary to ask Congress for more legislation or amendments to present legislation. Furthermore if they think Federal-State cooperation has advantages, the States themselves may wish to amend their present milk laws.

We must not lose sight of the fact that this adjustment program is very new. A great deal of additional work must be done, and it can be accomplished only by recognizing local responsibility through some body of men in the community in which a milk agreement or license is operating.

Of course, the members of such a local advisory committee would have to be persons of discrimination and discretion. They would have to remember at all times that the Secretary of Agriculture and the State officials share with them the responsibility of their actions.

One official milk industry board is now operating in Detroit, Mich., and has been of great service to the milk industry. This local board has been functioning for several months and was appointed by the Secretary of Agriculture upon local nominations. It is made up of three representatives of producers three representatives of distributors, and three representatives of the public. The Detroit milk license is one of the most successful we have established, and its success is due in great degree to the responsibility undertaken by the local industry board.

In working out this cooperative program between the Federal Government and the State governments, we must not forget that the Federal Government must at all times consider the problem from a broad, national standpoint.

In attaining our present goal of greater cooperation between the States and the Federal Government toward a happy solution of this problem, we shall also need the constant help and advice of the dairymen and of cooperative milk producers' associations.

We are pleased at the progress of State milk control work. We trust that the future will bring about a more thorough degree of unity between divisions of Government and cooperative associations of producers, for the welfare of farmers, the industry, and the public as a whole.

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SOME FUTURE PROBLEMS OF AGRICULTURAL ADJUSTMENT

A discussion by M. L. Wilson, Assistant Secretary of Agriculture, and H. R. Tolley, Assistant Administrator in charge of Program Planning for the Agricultural Adjustment Administration, before the Experiment Station Section of the Land Grant College Association on November 19.



We are in great need of a clearer and more precise definition of the term "planning" in relation to agriculture. Sometimes I think it would be very helpful if some foundation in search of a worthy project to support would finance a conference of delegates of persons employing the term. A catalog of definitions offered at such a conference would be delightful reading.

Certainly, here is a useful word which has taken on such a great variety of meanings as to make it almost useless. Most words, if not all of them, tend to move from a general meaning to specific definition. This is likely to happen in the case of the word "planning." I wish that we might plan to hasten the process.

To those who believe that agriculture is susceptible to greater order, to a refinement in its arrangements and to the release of greater cooperative energy, there appears to be danger in employment of the term "planning." In the first place, there is danger of their aspirations for a more orderly process being interpreted as encouraging some static arrangement. There are others who immediately associate the term with coercion, who conclude that it is the exclusive device of autocrats and dictators. Others think of it as a blue-print. It is a much-abused term.

Whatever planning processes we can bring into the pattern of agriculture must center about two main premises. First, that by literally and consciously planning we can add to agriculture a new alertness to change so as to make it less static in the face of new situations. It can then achieve a greater flexibility, greater ability to adjust itself to factors outside of itself; an ability to adapt itself to new facts. A simple illustration of this adaptability might be a more prompt response to a major market change induced, let us say, by the removal of a tariff wall by one

of the Nations which a few years ago was a principal importer of American farm products.

The second premise is that adjustments, or adaptions or efforts to adapt ourselves to new facts should be brought about through employment of democratic processes.

The successful functioning of democracy depends upon the widest possible dissemination of information, of the facts which form an essential foundation for a rational decision. Thus the problem is not only to isolate the facts but to bring them in an understandable form to those who should make the decision, the farmers themselves. They are capable of making what may turn out to be the wrong decision but the decision will be their own and they again are capable of reversing it.

Persons who raise doubts regarding the democratic process are not usually lacking in faith; rather they lack patience.

The democratic aspirations of the present agricultural administration are very genuine. It has yet to perfect a technique for making as completely democratic as is desirable the operation of the adjustment programs but there is reason to believe an excellent start has been made through the use of referenda. Perhaps their possibilities have hardly been scratched.

The whole agricultural adjustment process, if it is to realize upon its potentialities must be kept fully responsive to changes that come with almost "monotonous regularity" in this changing world. To freeze a situation is not adjustment. That would be to assume that the influences which bear on agriculture are inflexible. The influences which bear on agriculture from within itself and from outside its routine of tilling, planting, cultivating, harvesting and marketing are dynamic.

The adjustment process must reckon with many new factors within the next 12 months and in years to come. What, for instance, does American agriculture face as a result of events in Europe during the next six months? And internally, what will be the meaning of events in science to farmers in the next ten years? Planning does not mean prophecy but should changes come, it is part of the function of planning to interpret the significance of new events, to make that meaning clear to farmers and to propose a course of action fitting the new facts.

We are not many generations advanced from the day when a farmer sending cattle to market was forced to act blindly. He could not well anticipate what he would be paid because there were no grades or standards and no accepted scale of prices and dissemination of price information. He could be none too certain that among those who bid for his cattle, there were not several buyers who might actually be acting in collusion. We have made considerable progress since that day. But in some fields of agricultural information we have been forced to act somewhat blindly and in no field is this as marked as in regional, sub-regional and individual competition among farmers themselves.

But first let us examine the adjustment method to see if it is capable of assuming a function greater than simply providing for horizontal

increases or decreases in production in response to market demands. Perhaps adjustment has within it also the possibility of not only making easier the way but steadily encouraging the continuous increase of efficiency in agriculture through cooperative action. Clearly it is the responsibility of the adjustment programs to make smoother rather than more difficult the way for forces which promise agricultural advance.

The progress made in agriculture during the last half-century under the stimulus of a great export and rising domestic market have been tremendous. But even though most of our foreign markets have been lost for the present, for most commodities and great expansion year by year is not prudent for the present, the day ending continuing progress has not come. The days of progress in better land utilization, of better balanced farming, of greater employment of science, transfer of more of the burden to machines, of improvement in marketing methods - progress in the great broad field of agricultural efficiency - these days are not at an end. Perhaps there is ahead another great era of advance if we can master the new problems.

The adjustment machinery has carried farmers far in the direction of more unity of action. The fact that there are between three and four million farmers participating in adjustment programs means that the great majority of those engaged in commercial agriculture are much closer than ever before. There is more possibility of harmonious action. At the same time the adjustment machinery has brought a much closer association of our agricultural leadership. The experiment stations, the State colleges, the Extension Service have not only a new meaning to farmers; they have a new meaning to themselves.

Thus far, while addressing itself to a great emergency, the adjustment administration has succeeded remarkably well in keeping in harmony with more influences than the central job of adjusting production and increasing farm purchasing power. The desperate situation confronting the great majority of farmers called for prompt and decisive action. It was clear at the outset that this would mean the rise of instances of individual inequality. The remarkable thing, in many ways, is that despite the haste necessary both in formulating programs and in building up an organization to do the job, that so high a degree of flexibility has been maintained and that injustices were not more frequent. The flexibility of the adjustment method has made it possible to adjust satisfactorily most instances where injustices arose.

But we have no right to look back smugly because the problem of making room for a continuous growth of efficiency in agriculture - a subject to which you have labored in the experiment stations and have given years of devoted effort - is always with us. The function of seeking an increase, a continuous increase, in that efficiency is as vital as ever before. And adjustment has produced new problems which you will have an important part in solving.

One of the big problems facing the adjustment program as it moves into the next phase is the problem presented by the need for a more scientific and equitable basis for agricultural adjustments between regions and between farmers in a region than the flat percentage adjustments, up or down, from the past base period. State and county allotments have been based on past production, on precedent or what is becoming known as "the

historic base." The allotments have been horizontal. Members of the county associations selected by the farmers themselves in determining base periods have employed the historic base. The first exception to flat percentage adjustment is that for the 1935 corn-hog program announced today, which authorizes variations from 10 to 30 percent but the adjustments will be made again starting with an historic base.

This tends to make of past production a sort of vested property right. To meet an emergency condition the determination of base periods on the basis of past production seemed the only convenient and equitable manner. But it is none too soon to examine whether other elements should not be given consideration.

Individual farmers have given a great deal of attention to this in the light of their own situations and men intimately concerned with the problems of agriculture from the laboratory to the field have been puzzling over it.

There are dangers in continuing to employ the historic base as the sole controlling factor. Its use tends to freeze production by farms, by regions and type of farming areas on the basis of past usage of land. It tends to close the way to individual, regional and area adjustments which have always been going on by themselves and which for various reasons it is desirable to encourage instead of retard in the interest of greater farm, area and regional efficiency. But this brings us to a field filled with new risks.

We would like to see the least possible interference with sound rotation plans, with the shift of production from one area to another as induced by the free play of economic forces, and with production on a scale best suited to the most efficient use of machinery, tillage methods and balanced farming plans.

For the first emergency period, flat percentage adjustments did not necessarily interfere greatly with individual or even area and regional farm efficiency. The need for adjustment was paramount. But the flat percentage adjustments had the tendency to provide the highest base for those farmers who had continued to produce at or near the maximum while farmers who had responded more promptly to reduced demand and lower prices, had smaller historic bases.

There are several fundamental considerations in determining on what basis adjustments can be made. It is essential that the highest possible degree of equality among farmers be provided. It is essential that whatever method is used is such that every farmer can understand how the amount of his adjustment, up or down, was determined by his county committee. The reasoning back of it must be clear. A fundamental principle of democracy would be violated if the method and its reasoning was not clear-cut, and it took on some magic, mysterious hue.

Are we prepared to devise a new technique to meet this problem? What elements deserve consideration besides past production? It is perhaps easier to say what we want to avoid rather than to find concrete expression for what is needed. It is not easy to be articulate with respect to this.

We want to avoid any conflict between the adjustment quotas and principles of good land use, of balanced farming, of sound farm management principles. We want to make certain of harmony with respect to the adaptability of regions, of sub-regions or type-of-farming areas and of individual farms to the production of the different commodities.

The objectives for contributing to a continuous increase in the efficiency of agriculture of the soil scientists, the land planners, the crop specialists, the agricultural engineers, economists and others should find the widest possible expression.

We have long needed a new synthesis of all the specialized techniques in agriculture and now this synthesis must include adjustment. This is one of the greatest challenges in agricultural institutions today - the development of this new synthesis through which we may have assurance that we are not taking one step forward in one zone of agricultural activity while slipping backward somewhere else.

Irving Langmuir has said that in the field of pure science the challenge and the opportunities ahead do not lie so largely in the single track of physics, chemistry, or biology, but in the synthesis of these. Instead of a scientist working alone in his laboratory he sees teams of three or four bring together their specialized knowledge in a combined attack on problems which do not conveniently confine to a single field.

Can we fit physical, economic, biological and the other fields of science into an integrated whole? Can we harmonize or adjust these several techniques in the reference to the individual farm, the region and the type of farming area - to state it very roughly?

This whole field presents one of the real challenges to experiment stations and agricultural colleges today. These have met the challenges in the past. Who is better prepared to meet it? If others, less well equipped, less well grounded in principles, objectives, should seek in other ways and through less scientific methods to fit a solution in answer to this need, however groping, what might the result be?

The opportunity today exists for meeting this situation with a new synthesis with farmers more unified, and with the technical and administrative agricultural leadership, more solidified in this great adjustment effort. A great new body of knowledge is bound to grow out of the experience with adjustment requiring interpretation.

Attempts have been made over a long period to bring about this new synthesis. Recently, a most encouraging effort at Iowa State College came to our attention. A faculty seminar there is being devoted to an experiment in the integration of the several specialized fields of agricultural knowledge.

Farm management students have been struggling with this subject for a great many years. They know that there is a great paucity in basic data bearing on the inter-relationships of farms, of areas, of regions, between commodities. They know the dangers of attempting to turn out formulas. And they are aware of the dangers of following a set procedure for horizontal adjustment.

In the last analysis all farms are linked together by bonds, which while still invisible, are not quite as much of a mystery as they once were. In theory what happens to the corn yields on a farm in Kansas affects the farm producing corn in Ohio. The effect of one region upon another is more significant and easier to visualize, especially in this drouth year.

The results of a study carried on by a psychologist at an institution in New York state which is operated on the cottage plan illustrate the sort of influence we have in mind. This psychologist set out to trace all of the relationships and influences, major and minor, of personalities one upon another within each cottage, and between cottages. He projected thin, India-ink lines on a great chart to represent the lines of influence running through the institution.

The chart presents a picture much like the tracing of the nervous system of the body. He counted all types of influence which he was capable of recording. But the radiations of influence he brought to light were no greater than we might isolate if we could reduce to a comparable basis the lines which bind together our individual farms, regions and type of farming areas which make of our agriculture today a great sensitized pattern.

The problem of these inter-relationships is so important and of such infinite complexity that further examination of it is justified.

The regional specialization that has developed in our agriculture has brought in its wake a whole series of inter-regional relationships, some of which are complementary, some supplementary, while others are conflicting.

Feeder cattle, for example, are produced in the Range States and fed out in the Corn Belt. Feed produced in the Corn Belt is shipped to the northeast, to the south, and to the west to supplement the feed grown locally. Similar inter-regional movements take place in finished products ready for direct human consumption. Adjustments in supply resulting either from climatic disturbances or conscious effort, tend to upset this normal inter-regional flow of commodities, thereby bringing the economic interest of farmers in particular regions into apparent conflict with those of farmers in other regions.

Everyone is familiar with this continuous competition between regions, in the production of particular commodities. When the production of feed grains in the Corn Belt is large, for example, it is likely to result in low prices and low returns to the Corn Belt farmers, but the low prices react to the advantage, temporarily at any rate, of farmers in those regions which are normally deficient in feed production. The Corn Belt farmer, however, in seeking to avoid the effect of the low prices upon his income, likely will expand his production of dairy, poultry, and other products, and in so doing, will increase the competition for the dairy and poultry farmers in other regions and force down the price of their products.

High dairy and poultry prices in the East, on the other hand, by encouraging production in that region, will tend to increase the competition for the middlewestern producer. The dairymen of the Northeast, of course, are desirous of maintaining the prices of their products on a high level and may, through their base and surplus milk control plans, divert more and more of their production to surplus, and thereby materially depress the price of butter and butterfat to the Central Western producer.

During the past season this regional competition between commodities has been strikingly illustrated in the case of wheat. There are several distinct classes of wheat produced in the United States. Although there is a great deal of interchangeability between these different classes, certain of them have clearly defined uses. The soft wheats, for example, are most widely used in the making of pastries and hot breads. This class of wheat is produced largely in the Corn Belt and eastern seaboard states, in the form of soft red winter wheat, and in the West, particularly in the Columbia River Basin in the form of soft white wheat. Due to the geographic distribution of the drought, the Columbia Basin region was about the only important wheat region in the United States that had a good crop this year. The higher prices engendered by the curtailment of the supply in the interior states has made it possible to ship the Pacific Coast wheat into these interior markets, with a consequent increase in competition to the eastern wheat producer.

There is also intra-regional competition in the production of a commodity. Cotton illustrates this situation. The Cotton Belt, as you know, really consists of two belts, the eastern and western being divided by the Mississippi River. The eastern, or older cotton region, is characterized by small farms, uneven terrain, high rainfall, hand methods and the use of large amounts of fertilizer. In most of the Western Belt, on the other hand, production is on a much larger scale, with extensive use of machinery, a minimum amount of hand labor, and little or no fertilizer. The low cost methods of production have encouraged expansion and the lower prices resulting therefrom have made it increasingly difficult for the eastern producer to meet the competition.

Numerous other examples of a similar kind could be given to illustrate this play of competition between regions. It simply indicates again how closely the farmers in one region are linked to those in other regions. What is done on one farm or in one region affects all others.

The effect is very similar to the result obtained when a stone is thrown into the still water of a small lake. The waves move outward in an ever expanding circle, until all the water in the lake is eventually disturbed.

Equally as important as the relationships between regions, are relationships of another sort which are not as frequently discussed. I refer to the complementary, supplementary, and competing relationships between crop and livestock enterprises in a particular type of farming area and on an individual farm.

Every farm has a certain amount of resources in the way of land, fixed and working capital, labor force, and the like. The various commodities which he produces or may produce compete for the use of these resources. His major problem as a farm manager is to decide the way in which he can combine the various crop and livestock enterprises into a system of farming which will result in the maximum utilization of his resources; in short, to yield him the largest net return.

The way in which farmers in different regions and even in the same region make this combination varies widely. This is, of course, as it should be since they all do not possess the same resources and are not producing under the same physical and economic conditions.

Any scheme of adjustment which is economic and equitable for all farmers concerned must take those regional, area, and individual farm differences into account. If cognizance is to be taken of them, we shall have to give more attention in our adjustment programs to regional and area differences in types of farming and combinations of enterprises on individual farms. What this means geographically may be illustrated by a series of type of farming maps I shall now show you.

The first map shows the United States divided into 12 major agricultural regions--in which are shown the well known Corn and Cotton Belts, Wheat, Range Livestock, Dairy and other regions. This map illustrates the impossibility of considering the agriculture of the nation as a whole as a single unit. The problems in one region are distinct from those in another and have to be considered separately.

The character of the farming in any one region also is not uniform and homogenous, as is shown in the second map. In this map we have taken the large region shown on the first map as the Cotton Belt and broken it down into various subregions according to variations in physical conditions and types of farming found. At least 15 to 20 general regions can be easily distinguished. First, you will note the small irrigated valleys in the Southwest, in which cotton is the predominant crop. Next comes the large scale cotton area of West Texas and Oklahoma; then the Oklahoma-Texas General Farming Region with cotton, the Black-waxie Prairie of Texas, the Piney Woods of Northeast Texas, the Red River, Arkansas and Mississippi Deltas, the Mississippi-Alabama Clay Hills and Rolling Uplands, the Northern and Southern Piedmont, Coastal Plain, etc.

The proportions of the total farm acreage in cotton and the proportions in which it is combined with other enterprises varies from one subregion to another.

But this process of refinement may still be carried further. None of these subregions are entirely homogenous, as is illustrated by the next map. In this map we have taken the subregion designated as the Mississippi-Alabama Clay Hills and Rolling Uplands and divided it into six type of farming

areas. Starting on the west, the first subdivision is the Long-leaf Pine Cut-over area, in which only 57 percent of the land area is in farms and 37 percent of the farm area is in crops and 18 percent in cotton. Cotton production in 1929 in this area was 48 bales per square mile of farm land.

The next area comprises the Clay Hills proper. This area had about the same percent of the land in farms as the other area, but had only 32 percent of the farm land in crops and 12 percent in cotton. Cotton production also dropped to 29 bales per square mile.

The third area is the Mississippi-Alabama Black Belt. This area has close to 70 percent of the land area in farms, 38 percent of the farm area in crops, and 21 percent in cotton. The production of cotton is around 50 bales per square mile. In this area about 25 to 30 percent of the total income was received from livestock and livestock products in 1929. The Northern part of the Black Belt can, in fact, be distinguished as a sub-area because of the larger percent of the income from dairy than for the area as a whole.

The last area is a part of the Upper Coastal Plain. This area has about 60 percent of the land area in farms, from 40 to 50 percent in crops and from 17 to 21 percent in cotton. Cotton production, however, is somewhat lower than in the Black Belt, being 35 to 40 bales per square mile of farm land in 1929.

If data were available by smaller geographic units, these areas, in turn, could be refined still further until we got down to the individual farm.

We probably have indicated to you enough of the differences to show that the problem of adjustment not only is different for different regions, but also for the type of farming areas and for individual farms within them.

If agricultural adjustment is to be on a logical and scientific basis it must take these differences into account; it must make it possible for individual farmers to have balanced systems of farming and the program must have sufficient flexibility to permit changes in production in different regions and on different farms as economic and other conditions change. Obviously, to plan and work out such an adjustment program would call for a vast amount of data and information not now available of the kind that is provided through land use and farm management studies as well as research in the physical and biological sciences.

The question is: How quickly can the farmers of the country with the help of their experiment stations and other public agencies, approach this goal of long-time continuous agricultural adjustment?

The various steps involved might be somewhat as follows:

First, the determination for each commodity of the national volume of production desired. For example: What volume of wheat production annually shall

be the goal of the adjustment program? How many bales of cotton? How many bushels of corn? etc.

In arriving at a judgment on these questions demand conditions both in this country and abroad for the products of our farms must be appraised as accurately as possible, as well as the adaptability of the different regions of the country to the production of each commodity. It is to be expected that a national agency such as the AAA would take the lead here, but the information and data concerning the different regions and their adaptability to the production of the different commodities would come largely from the research and fact finding agencies in the States and in the Federal government. Of course, these national goals or quotas must be acceptable to the farmers who produce the commodity under consideration. Hence farmers should have a voice in their determination.

Second, Determination of the proportion of this national total for each commodity that is to be produced in each of the agricultural regions or type of farming areas. For example: What proportion of the total wheat production of the country shall be from the Pacific Northwest? What proportion from the hard winter wheat region of the Great Plains? What proportion from the hard spring wheat region of the Dakotas and Montana? And what proportion from the soft winter wheat region of the Corn Belt and Northeastern States? Or in the case of cotton: What proportion of the production shall be from the eastern belt and what proportion from the western belt?

Past production in each region or area would serve as a guide in making these determinations but it would by no means be the only criterion. The Pacific Northwest is admirably adapted to the production of wheat, but a large part of the wheat grown there has been exported, and with the decline in our exports, should wheat production in this region be adjusted in the same proportions as in the hard spring wheat region, whose product has been used almost entirely for domestic consumption?

In the Cotton Belt, a progressive shift of production westward has accompanied the development of new cotton land in the west where apparently production can be carried on at a lower cost than in many parts of the Eastern Belt. To what extent should planned adjustments take this factor into account?

In considering adjustments between regions, and areas, the poor farming areas - the so-called "problem" areas to which the land economists and land planners are now giving particular attention - would come in for special consideration. In many such areas it is already known that even the best systems of farming, under the best economic conditions that we can hope for, will not yield incomes sufficient to provide a decent living for the farmers there. Obviously in these areas past production is a very poor criterion on which to base adjustments.

In making plans as to the proportioning of the total national production among the various regions, representatives of the farmers and agricultural agencies from each region must confer with and debate with those from other regions concerning the adaptability of each region to the production of the commodity in question. These groups will need to have as a basis for reaching an agreement or conclusion information and data of the kind mentioned above, which the experiment stations should be in a position to supply.

All the experiment stations whose states are wholly or partially included in a particular region or area should combine forces in providing the information for that region. The program of cooperation which the agricultural colleges of those states lying partly within the Tennessee Valley are developing with the T.V.A. and the Federal Department in an effort to provide a regional approach to the problems of agriculture and agricultural adjustment in the Tennessee Valley is an example of what I have in mind. The program of planned agricultural adjustment and land use will, I believe, inevitably require an increasing degree of regional cooperation among the state colleges and experiment stations, with a corresponding diminution in the tendency to restrict the work of each institution within the artificial lines of the state boundaries.

Finally, there would remain the problem of "allocating" the production of the various commodities in each region or area among the farmers in that region or area on an equitable basis.

The aim should be to promote and encourage the systems of farming, or combinations of enterprise, on the individual farms that would provide for the best utilization of the farmers' resources, conserve soil fertility and provide the maximum farm income over a period of years, keeping in mind at all times the national and regional goals.

In this final phase - we must depend, I think, more than we have up to the present, on the farmers themselves, working through county or area associations. The functions of the research and fact finding agencies in this phase would be to supply the farmers and their chosen representatives with information and data of the kind that result from - or should result from - dynamic research in economics and the physical and biological sciences, which will help to guide the farmers in each area to wise decisions on such questions as: What is the maximum percentage of the crop land on a farm in this area that should be in corn? In wheat? In cotton? What is the optimum ratio between numbers of livestock and acres in feed grains for the farms in this area? What is the minimum proportion of the farm area that should be in hay and pasture? Or in soil improving crops?

It would obviously not be just and equitable to continue indefinitely to base the agricultural adjustment program entirely on the acreage devoted to each crop on each individual farm in a fixed period in the past. We all know that in every neighborhood are found some farmers who, during the

base periods used in the present adjustment programs, had planted too little or too much of some crop to conform to the cropping systems best adapted to their farms.

As a matter of fact in the present adjustment programs some significant moves have already been made toward overcoming the injustices that are inherent in any method of basing quotas on records of past production. In certain wheat counties in the west last year, the local committees took into consideration the best farm management practice in allocating quotas among the various cooperating farmers. If, for example, 65 percent were agreed upon as the best proportion of farm land to be put in wheat in their section, those farmers whose wheat acreage had been a good deal higher than 65 percent were persuaded to reduce the percentage by a fair amount. Farmers who had only a small proportion of their farm in wheat were thus required to make only minor adjustments in order to bring the total wheat acreage of all cooperating farmers into line with the county quotas. In this way, the adjustment program could be carried forward without interfering with good farm management practice by the individual farmers.

In the corn-hog program for 1935, as we have already indicated, cooperating farmers may produce an acreage of corn varying from 70 to 90 percent of the acreage in the base period. Thus every farmer who participates, instead of being required to make a flat percentage adjustment in his production, may choose, within a range of 20 percent, that adjustment which in his judgment is best suited to the conditions of his particular farm.

In this program, efforts are also being made to liberalize conditions so as to take into account certain exceptional cases. There are, for instance, farmers whose corn acreage for the base period was so small that in 1934 it was difficult for them to come into the corn-hog program and still operate their farms according to good farm management principles. The intention is to work out arrangements by which such farmers, after they have shown that weather conditions or other factors outside their control were responsible for a low corn acreage, may increase their acreage above that in the base period within a certain maximum percentage and still participate in the program. The increased acreage permitted will be largely governed by the percentage of crop land devoted to corn in their communities. Such farmers, while they would not be eligible for benefit payments on their corn acreage, would be eligible to receive benefits for cooperating in the hog program. Similarly, there are farmers whose hog base was such that it was difficult for them to come in under the corn-hog program, and still maintain good farm practice. New adjustment arrangements are being worked out for them also, following the same principle as in the case of corn.

To provide year to year flexibility, to allow for shifts from farm to farm or even from region to region, quotas or allotments might be made negotiable or transferable between farmers. A step in this direction is found in the so-called Bankhead cotton certificates. The Bankhead Act

provided that these tax-exemption certificates shall be transferable and negotiable certificates covering many hundred thousand bales which have been bought and sold since the 1934 ginning season started.

These represent only meagre first steps toward a well-ordered long-time program of agricultural adjustment but they show that farmers themselves are ready to move in this direction and that the machinery of adjustment which they now have can be adapted, to a certain extent at least, to meet the need.

You may feel that the goal of agricultural adjustment as here outlined could be achieved only if the farmers were willing to turn over to some government agency the determination of how much of each commodity each farmer should produce. But I believe there is a democratic approach to it with which the farmers of the country, using the centralizing power of Government as they are now doing in their agricultural adjustment programs, can progress toward this goal just as rapidly as they can obtain from their State Colleges and experiment stations and from the Federal departments, the information and data they need to enable them to make wise decisions on the many regional, area and individual-farm problems involved.

Perhaps we can visualize more clearly just what type of information would be needed if we consider the problem of adjustment in a particular type of farming area. The type of farming area from one point of view, as we have seen, is merely a refinement of the larger agricultural region, but, from another, it is a generalization from the smaller county-unit and individual farming systems comprising it. Therefore, the first problem in planning adjustments in such an area, is to determine the degree of homogeneity existing within it.

This will involve, in the first place, an examination of the range in physical conditions found - the nature of the soil, the slope, the covering, the extent to which erosion is, or is not a problem, and factors of like character. It will next be expedient to subdivide the area into classifications in which there is a greater uniformity than exists for the area as a whole. To do this accurately and effectively, soil, topographic and other physical data by small geographic units will be needed. Where detailed physical surveys have been made the problem will be relatively simple, but where such are not available only rough approximations can be made.

In addition to the physical data, it will also be desirable to have a detailed picture of crop yields on the different soil types of size and organization of farms showing the acreage and production of the various cultivated and pasture crops, the number and production of the different classes of livestock, the prevailing rotation practices, the size and type of machinery used, methods of feeding, and disposal of products, and the like.

Much of this information, as you know, is not now available even by

counties, to say nothing of the smaller geographic units. The Agricultural Census and the Division of Crop and Livestock Estimates now supply most of the information available. However, they need to be further expanded and refined. Farm Management surveys have yielded some of these data for selected areas, but the ordinary farm business survey will have to be materially altered if it is to give us specifically the type of information needed. Much the same is true of some of the data resulting from physical and biological studies.

Much duplicated effort could be avoided if there were a greater harmony of viewpoint and objective between the research efforts of the physical and biological group, on the one hand, and the agricultural economist on the other. If the results of research are to have practical application to the adjustment problem, the studies must be planned with this in view. The input-output relationships obtained from most experimental feeding, fertilizer and yield experiments as at present set up, are of limited usefulness in this problem. Too often these experiments fail to show what outputs follow from successive inputs, and therefore, do not give farmers the full information necessary to determine the most profitable adjustments in his feeding and cropping practices.

In addition to data which may be obtained through surveys and experimental studies, farmers themselves can contribute much in the way of practical knowledge and experience. The first hand knowledge they have had will prove of great value in determining what combinations and sequences of crops likely will prove most practicable and effective in conserving and building up fertility, in minimizing erosion and in providing for the efficient operation of the farm. Farmers also could help immeasurably in throwing light upon the variations in size and organizations of farms in a particular locality, if they voluntarily would send in each year, to their county adjustment committee, an accurate statement of their operations, showing particularly the acreage and production of the several crops and numbers, production and sale of the various classes of livestock.

With information and data of this character available for the type area as a whole, and for the counties and districts within it the committee of farmers and others delegated to determine desirable adjustments for the area in question will be in a reasonably good position to do so.

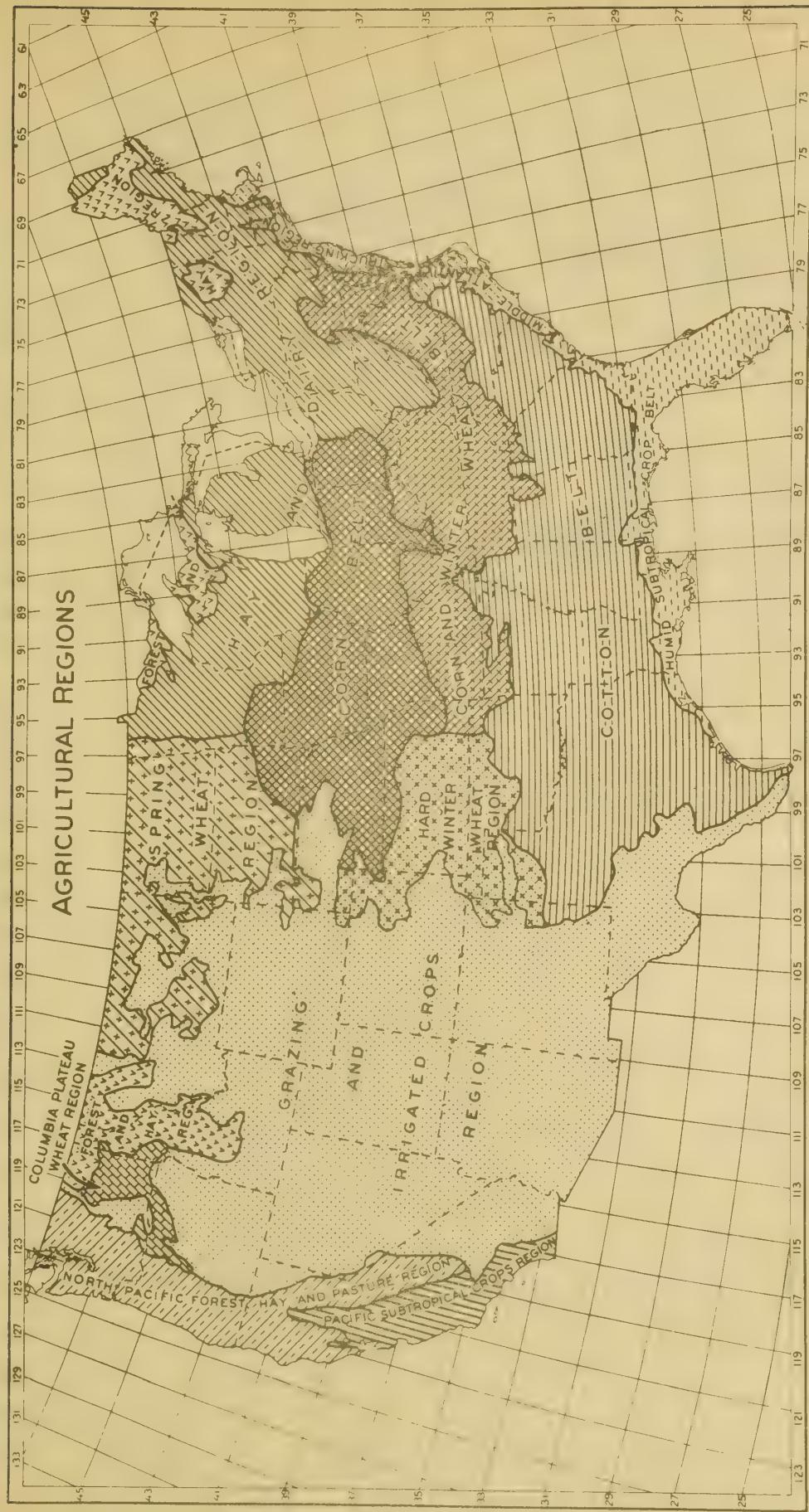
The whole problem presented by the complex relationships within our system of agriculture justifies the most earnest attention of those who have responsibilities for research in agriculture. We cannot afford to lose sight of the ideal of making the way for a continuous increase in agricultural efficiency. There is no real reason for any conflict of this ideal with the necessity for adjustment if we can rise to this challenge as we have met other challenges in the past.

It calls for not only a synthesis - it calls for what we might call

dynamic synthesis, a continuing and never-halting task of keeping in step with change; to be eternally up-to-date with the dynamic forces both within and outside of agriculture.

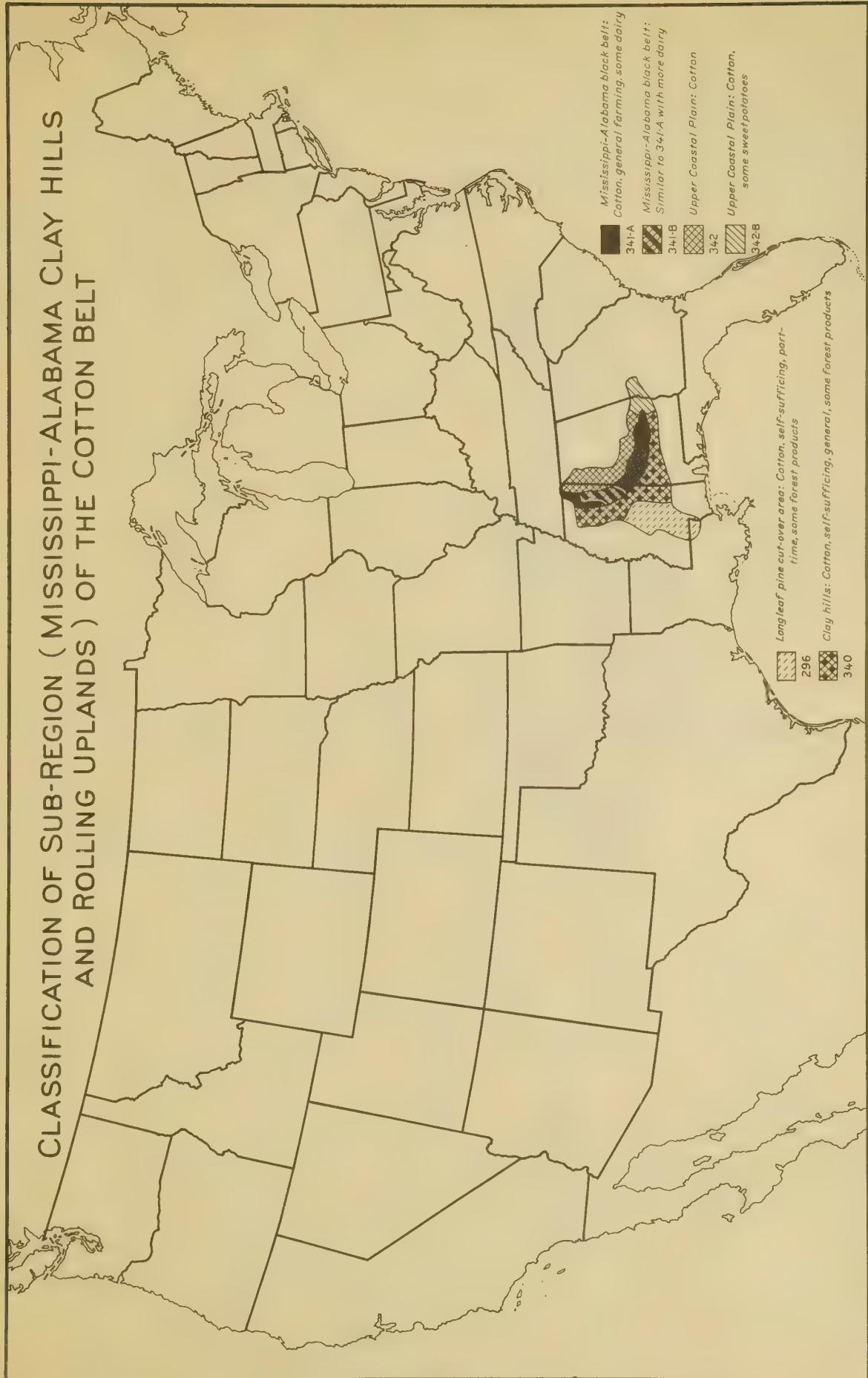
It means cooperation on a new scale in the whole broad field of agricultural research and fact-finding. It means that we will have to think and work in terms of regions and areas as nature laid them out.

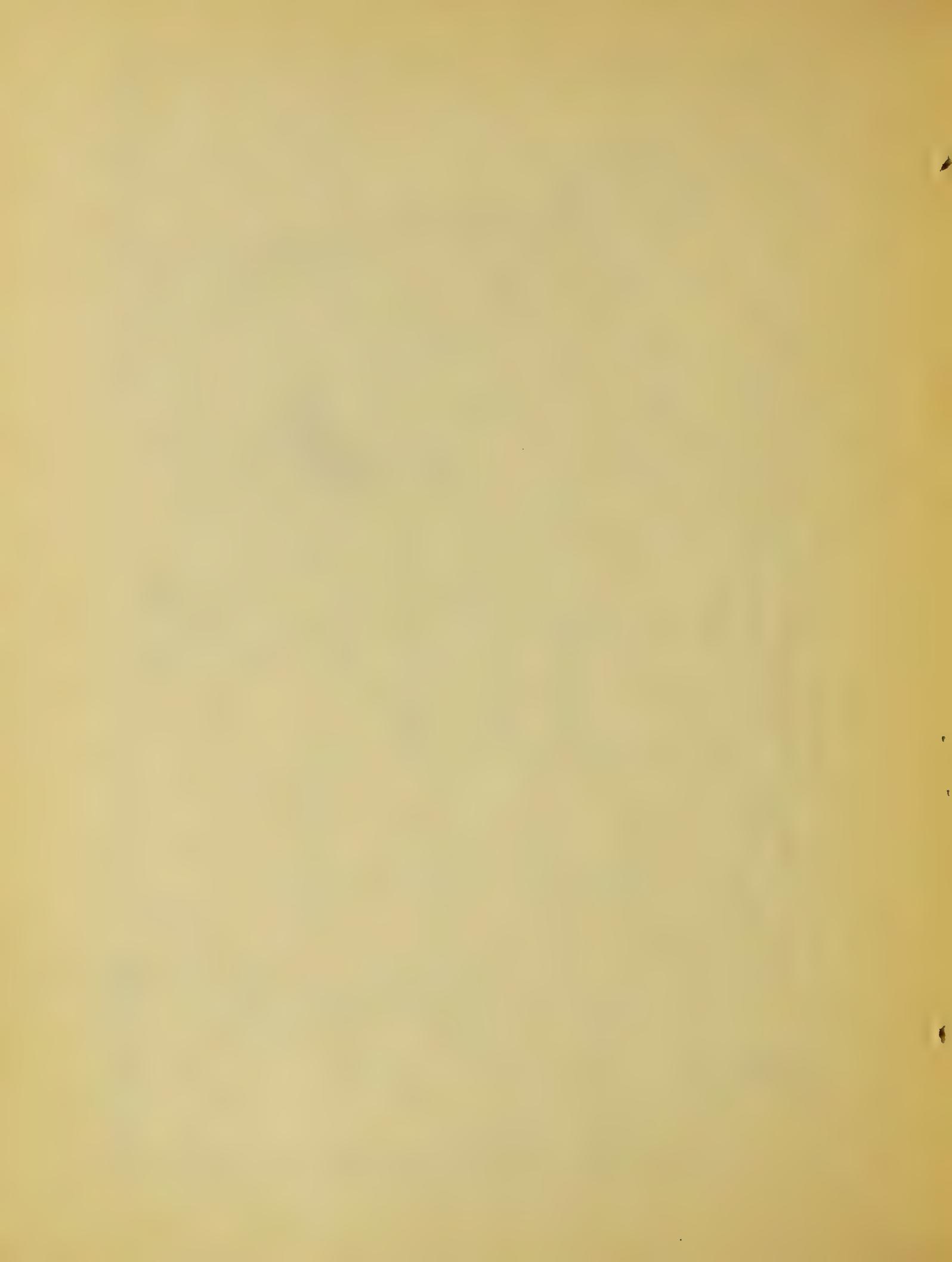




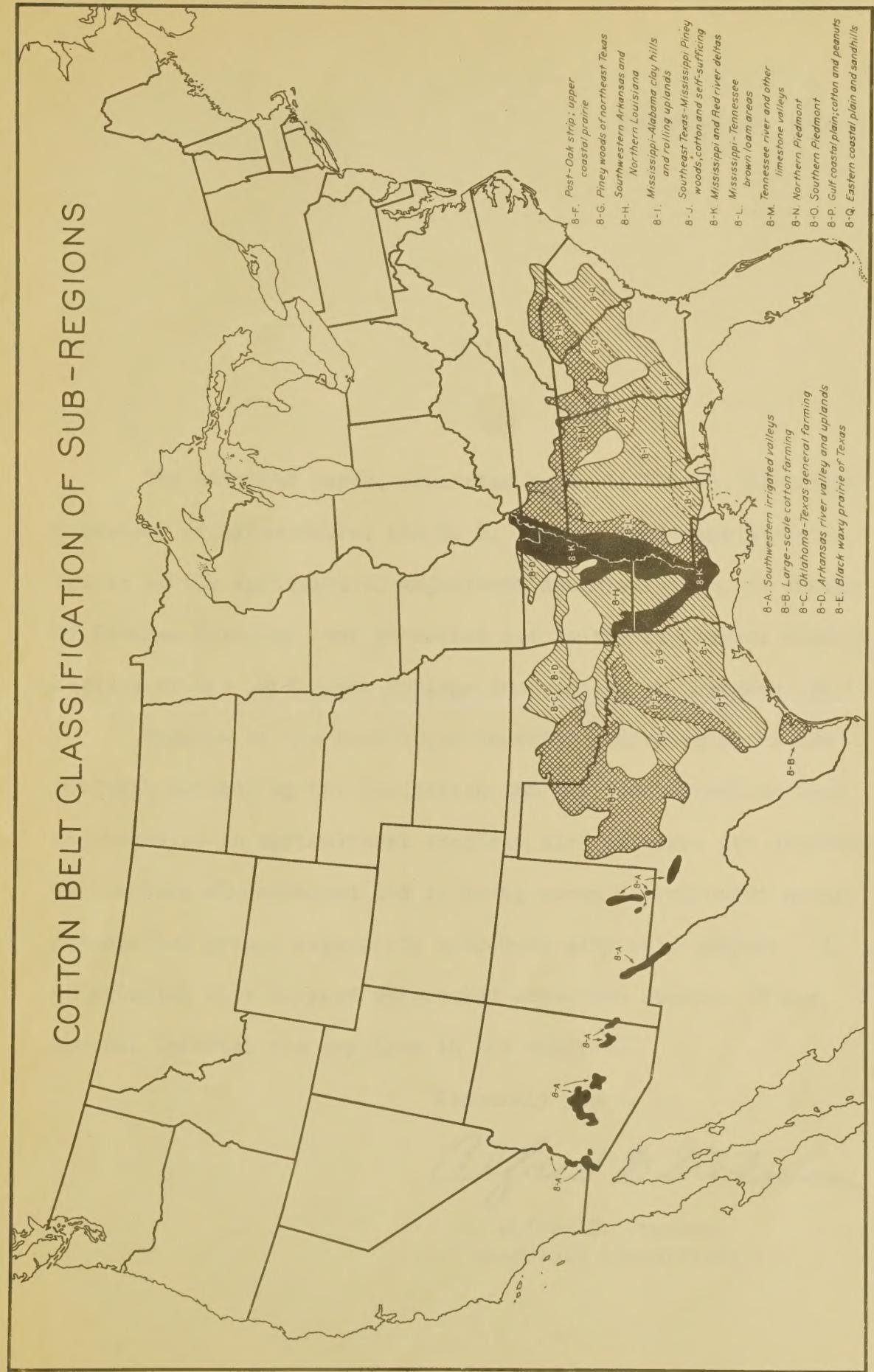


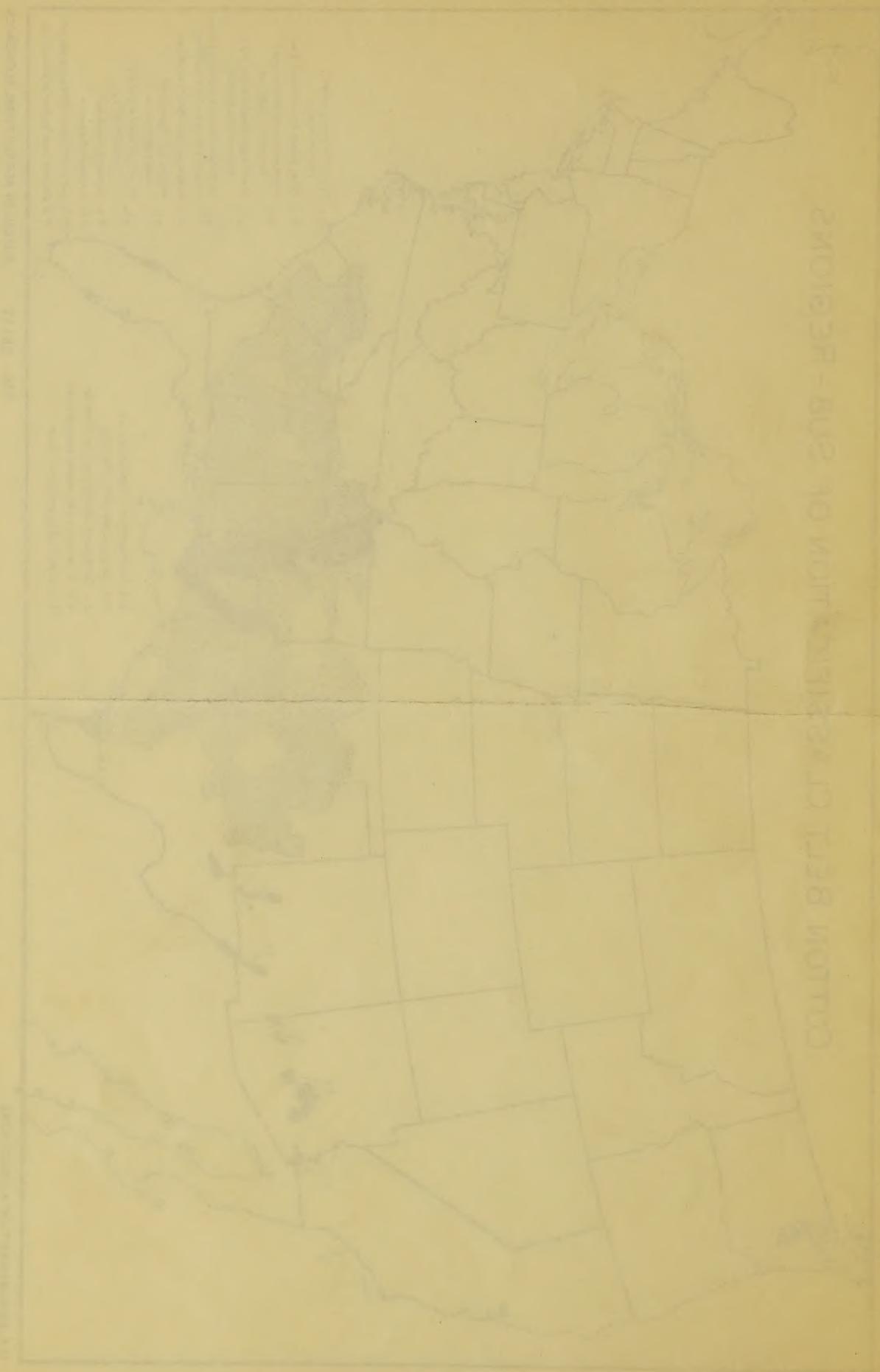
CLASSIFICATION OF SUB-REGION (MISSISSIPPI-ALABAMA CLAY HILLS AND ROLLING UPLANDS) OF THE COTTON BELT





COTTON BELT CLASSIFICATION OF SUB-REGIONS





UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT ADMINISTRATION
WASHINGTON, D. C.

December 18, 1934.

The attached paper, presented by M. L. Wilson, Assistant Secretary of Agriculture, and H. R. Tolley, Assistant Administrator of the Agricultural Adjustment Administration, in charge of Program Planning, was presented before the Experiment Station Section of the Land Grant College Association on November 19.

Because of the particular interest centering about the subjects brought up for discussion and the wide attention this has received in agricultural economic circles since its delivery, it has been mimeographed and is being given distribution among persons and groups especially concerned with this subject. I am bringing this to your particular attention because of the special interest you may have in the subject.

Sincerely yours,

Alfred D. Stedman

Alfred D. Stedman,
Assistant Administrator.

ПРИЧУВАНИЯ РОДИМЫХ МЕСТАХ ОСТИ
ПОКАЗАНИЯ СОСЕДОВ ПОКАЗАНИЯ
СО СВОИМИ